



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Mixture
Physical state	: Liquid
Product name	: ZIPCONE™ FN
Product code	: PP1-ZPFN
Synonyms	: CURE SILICONE ; SILOXANES AND SILICONES, (CYCLOHEXYLAMINO)METHYL METHYL, DIMETHYL, (CYCLOHEXYLAMINO)METHYL TERMINATED
Chemical family	: ORGANOSILOXANE

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

GHS09

Signal word (CLP) :

: Danger

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Hazardous ingredients	: n-Heptane
Hazard statements (CLP)	: H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P280 - Wear protective gloves/protective clothing/eye protection/face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P240 - Ground/bond container and receiving equipment. P261 - Avoid breathing vapours. P264 - Wash hands thoroughly after handling. P312 - Call a POISON CENTER if you feel unwell.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
n-Heptane	(CAS-No.) 142-82-5 (EC-No.) 205-563-8 (EC Index-No.) 601-008-00-2	64 - 70	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Siloxanes and silicones, (cyclohexylamino)methyl methyl, dimethyl, (cyclohexylamino)methyl terminated	(CAS-No.) 107659-90-5	28 - 35	Not classified
Cyclohexylamine	(CAS-No.) 108-91-8	1 - 2	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Repr. 2, H361f

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of water/.... Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Suspected of damaging fertility or the unborn child. May cause genetic defects.
Symptoms/effects after inhalation	: May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Heptane can cause vertigo, incoordination and stupor at 5000ppm. Vapor inhalation of heptane may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media : Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Irritating fumes of hydrochloric acid and organic acid vapors may develop when material is exposed to water or open flame.
Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection. Do not attempt to take action without suitable protective equipment.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Collect spillage. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.
Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.
Storage conditions : Keep container tightly closed. Keep in a cool place. Store locked up.
Incompatible materials : Alcohol. Oxidizing agent. Water.
Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

n-Heptane (142-82-5)		
EU	IOELV TWA (mg/m ³)	2085 mg/m ³
EU	IOELV TWA (ppm)	500 ppm
Austria	MAK (mg/m ³)	2000 mg/m ³ (all isomers)

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n-Heptane (142-82-5)		
Austria	MAK (ppm)	500 ppm (all isomers)
Austria	MAK Short time value (mg/m ³)	8000 mg/m ³ (all isomers)
Austria	MAK Short time value (ppm)	2000 ppm (all isomers)
Belgium	Limit value (mg/m ³)	1664 mg/m ³
Belgium	Limit value (ppm)	400 ppm
Belgium	Short time value (mg/m ³)	2085 mg/m ³
Belgium	Short time value (ppm)	500 ppm
Bulgaria	OEL TWA (mg/m ³)	1600 mg/m ³
Cyprus	OEL TWA (mg/m ³)	2085 mg/m ³
Cyprus	OEL TWA (ppm)	500 ppm
France	VLE (mg/m ³)	2085 mg/m ³ (restrictive limit)
France	VLE (ppm)	500 ppm (restrictive limit)
France	VME (mg/m ³)	1668 mg/m ³ (restrictive limit)
France	VME (ppm)	400 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	2100 mg/m ³ (all isomers)
Germany	TRGS 900 Occupational exposure limit value (ppm)	500 ppm (all isomers)
Gibraltar	Eight hours mg/m ³	2085 mg/m ³
Gibraltar	Eight hours ppm	500 ppm
Greece	OEL TWA (mg/m ³)	2000 mg/m ³
Greece	OEL TWA (ppm)	500 ppm
Greece	OEL STEL (mg/m ³)	2000 mg/m ³
Greece	OEL STEL (ppm)	500 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	400 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	500 ppm
Italy	OEL TWA (mg/m ³)	2085 mg/m ³
Italy	OEL TWA (ppm)	500 ppm
Latvia	OEL TWA (mg/m ³)	350 mg/m ³
Latvia	OEL TWA (ppm)	85 ppm
USA IDLH	US IDLH (ppm)	750 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	350 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	85 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	1800 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (ppm)	440 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2000 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm
Spain	VLA-ED (mg/m ³)	2085 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	500 ppm (indicative limit value)
Switzerland	KZGW (mg/m ³)	1600 mg/m ³
Switzerland	KZGW (ppm)	400 ppm
Switzerland	MAK (mg/m ³)	1600 mg/m ³
Switzerland	MAK (ppm)	400 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	1200 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	1600 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	2085 mg/m ³
United Kingdom	WEL TWA (ppm)	500 ppm
United Kingdom	WEL STEL (mg/m ³)	6255 mg/m ³ (calculated)
United Kingdom	WEL STEL (ppm)	1500 ppm (calculated)
Czech Republic	Expoziční limity (PEL) (mg/m ³)	1000 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	820 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Finland	HTP-arvo (8h) (mg/m ³)	1200 mg/m ³
Finland	HTP-arvo (8h) (ppm)	300 ppm
Finland	HTP-arvo (15 min)	2100 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	500 ppm

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n-Heptane (142-82-5)		
Hungary	AK-érték	2000 mg/m ³
Hungary	CK-érték	8000 mg/m ³ (Substances with European indicative limits (96/94/EC, 2000/39/EC, 2006/15/EC, 2009/161/EU), which currently has no peak limit concentration. In these cases, Annex 3.1. should be used exercised)
Ireland	OEL (8 hours ref) (mg/m ³)	2085 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	500 ppm
Ireland	OEL (15 min ref) (mg/m ³)	6255 mg/m ³ (calculated)
Ireland	OEL (15 min ref) (ppm)	1500 ppm (calculated)
Lithuania	IPRV (mg/m ³)	2085 mg/m ³
Lithuania	IPRV (ppm)	500 ppm
Lithuania	TPRV (mg/m ³)	3128 mg/m ³
Lithuania	TPRV (ppm)	750 ppm
Malta	OEL TWA (mg/m ³)	2085 mg/m ³
Malta	OEL TWA (ppm)	500 ppm
Norway	Grenseverdier (AN) (mg/m ³)	800 mg/m ³
Norway	Grenseverdier (AN) (ppm)	200 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	800 mg/m ³
Norway	Grenseverdier (Korttidsverdi) (ppm)	200 ppm
Poland	NDS (mg/m ³)	1200 mg/m ³
Poland	NDSch (mg/m ³)	2000 mg/m ³
Romania	OEL TWA (mg/m ³)	2085 mg/m ³
Romania	OEL TWA (ppm)	500 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	2085 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	800 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	200 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	1200 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	300 ppm
Canada (Quebec)	VECD (mg/m ³)	2050 mg/m ³
Canada (Quebec)	VECD (ppm)	500 ppm
Canada (Quebec)	VEMP (mg/m ³)	1640 mg/m ³
Canada (Quebec)	VEMP (ppm)	400 ppm
Australia	TWA (mg/m ³)	1640 mg/m ³
Australia	TWA (ppm)	400 ppm
Australia	STEL (mg/m ³)	2050 mg/m ³
Australia	STEL (ppm)	500 ppm
Portugal	OEL TWA (mg/m ³)	2085 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	500 ppm (indicative limit value)
Portugal	OEL STEL (ppm)	500 ppm
Cyclohexylamine (108-91-8)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

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Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid. Viscous.
Colour	: No data available
Odour	: Amine.
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: < -20 °C
Boiling point	: 98 °C initial (heptane)
Flash point	: 0 °C
Auto-ignition temperature	: 204 °C (heptane)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: 40 mm Hg @ 22°C (heptane)
Relative vapour density at 20 °C	: 3.45 (heptane)
Relative density	: 0.81
% Volatiles	: > 60 %
Solubility	: Insoluble in water. Reacts with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1 - 6.7 vol % (lower; upper: heptane)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Alcohol. Oxidizing agent. Water.

10.6. Hazardous decomposition products

Cyclohexylamine. Silicon dioxide.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

n-Heptane (142-82-5)	
LD50 oral mouse	5000 mg/kg
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (mg/l)	103 g/m ³ (Exposure time: 4 h)
Toxicity information	1000 ppm Inhalation (heptane)-human, TCLo

Cyclohexylamine (108-91-8)	
LD50 oral rat	156 mg/kg
LD50 oral mouse	224 mg/kg
LD50 dermal rabbit	320 mg/kg
ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
The volatile byproduct of cure is cyclohexylamine for which human mutagenic data have been reported.
Carcinogenicity : Not classified

Cyclohexylamine (108-91-8)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Potential adverse human health effects and symptoms : The volatile byproduct of cure is cyclohexylamine, which has been reported as toxic.
Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Heptane can cause vertigo, incoordination and stupor at 5000ppm. Vapor inhalation of heptane may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness.
Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.
Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

n-Heptane (142-82-5)	
LC50 fish 1	375 mg/l (Exposure time: 96 h - Species: Cichlid fish)

Cyclohexylamine (108-91-8)	
LC50 fish 1	44 mg/l <i>Oncorhynchus mykiss</i> (static)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

n-Heptane (142-82-5)	
Log Pow	4.66

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1139
UN-No. (IMDG) : 1139
UN-No. (IATA) : 1139
UN-No. (ADN) : 1139
UN-No. (RID) : 1139

14.2. UN proper shipping name

Proper Shipping Name (ADR) : COATING SOLUTION
Proper Shipping Name (IMDG) : COATING SOLUTION
Proper Shipping Name (IATA) : Coating solution
Proper Shipping Name (ADN) : COATING SOLUTION
Proper Shipping Name (RID) : COATING SOLUTION
Transport document description (ADR) : UN 1139 COATING SOLUTION ((CYCLOHEXYLAMINO)METHYL METHYL, DIMETHYL, (CYCLOHEXYLAMINO)METHYL TERMINATED in heptanes), 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG) : UN 1139 COATING SOLUTION ((CYCLOHEXYLAMINO)METHYL METHYL, DIMETHYL, (CYCLOHEXYLAMINO)METHYL TERMINATED in heptanes), 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA) : UN 1139 Coating solution ((CYCLOHEXYLAMINO)METHYL METHYL, DIMETHYL, (CYCLOHEXYLAMINO)METHYL TERMINATED in heptanes), 3, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) : UN 1139 COATING SOLUTION ((CYCLOHEXYLAMINO)METHYL METHYL, DIMETHYL, (CYCLOHEXYLAMINO)METHYL TERMINATED in heptanes), 3, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) : UN 1139 COATING SOLUTION ((CYCLOHEXYLAMINO)METHYL METHYL, DIMETHYL, (CYCLOHEXYLAMINO)METHYL TERMINATED in heptanes), 3, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3



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IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



ADN

Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3



RID

Transport hazard class(es) (RID) : 3
Danger labels (RID) : 3



14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1
Special provisions (ADR) : 640C
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP8
Tank code (ADR) : L1.5BN
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33

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Orange plates :

33
1139

Tunnel restriction code (ADR) : D/E

- Transport by sea

Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : B
Properties and observations (IMDG) : Miscibility with water depends upon the composition.

- Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3
ERG code (IATA) : 3L

- Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 640C
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E2
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : F1
Special provisions (RID) : 640C
Limited quantities (RID) : 5L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP8
Tank codes for RID tanks (RID) : L1.5BN
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

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Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

Contains no REACH Annex XIV substances

% Volatiles : > 60 %

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : Cyclohexylamine is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B

ZIPCONE™ FN

Safety Data Sheet

Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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

The logo for Gelest, featuring the word "Gelest" in a large, white, serif font. The letters are set against a light blue background that is shaped like a right-angled triangle pointing to the right. The "G" is partially cut off on the left side of the image.

Filler-Free Fast-Cure Pure Silicone Elastomer for Maximum Release

Features: Provides thick film rapid-cure pure silicone elastomers with good adhesion to metals, glass and solvent compatible plastics and fibers. Products are free of abrasive-silica. Systems are high-speed moisture cure.

Applications:

- electronic devices** - forms a soft conformal coating, free of abrasive silica.
- rubber and plastic overcoat** - provides a uniform low-roughness coating suitable for release and with an exceptionally smooth touch.
- supported membranes** - filler-free silicone allows maximum transport of gases.
- thin film seals and conformable gaskets** - may be applied by dipping or brushing.

Capsular Description:	Thickness		Cure		Hardness		Type	
		thin-thick		air/moisture		low		solvent-borne 1-part

Gelest Zipcone™ FN polydimethylsiloxane RTV for rapid, neutral cure, maximum release

Description

Zipcone™ FN is a moisture activated filler-free silicone RTV dispersed in odorless hydrocarbon. In the presence of atmospheric moisture, a condensation of silicone prepolymers occurs. The byproduct of the cure reaction is an amine. Amine byproducts have little or no corrosive effects on most metals, but copper is affected.

Cured Properties

Tensile Strength	>50psi
Elongation	>150%
Durometer, Shore A	>5
Tear Strength	>5pli
Refractive Index	1.403

Uncured Properties of Zipcone™ FN

Solids	32-35%
Viscosity	100-150 cSt.
Skin-over time	15 minutes
Cure time (0.25mm)	2 hours
Specific gravity	0.81
Flashpoint	0°C

Standard Packaging

PP1-ZPFN Zipcone™ FN	
	100g/\$28.00
	650g/\$140.00
	10kg/commercial package

Cautions

Zipcone™ F series contain flammable solvents and cure released byproducts which are eye irritants. Avoid skin and eye contact. Use in a well ventilated area wearing gloves and safety glasses. Consult MSDS of the specific product used for additional safety information.

Application Methods

Zipcone™ F series is applied by dipping, brushing or spin-on. Solvent is allowed to evaporate in an exhausted area. Cure is at room temperature. After opening, containers should be inerted with dry air or nitrogen before sealing to avoid cure in the container.